10/725,352

REMARKS

In view of the following discussion, the Applicants submit that none of the claims now pending in the application is made obvious under the provisions of 35 U.S.C. §103. Thus, the Applicants believe that all of these claims are now in allowable form.

I. REJECTION OF CLAIMS 1-5, 9-21 AND 24-28 UNDER 35 U.S.C. § 103

Claims 1-5, 9-21 and 24-28 stand rejected as being obvious over the Abrari et al. patent (United States Patent No. 7,020,869, issued March 28, 2006, hereinafter "Abrari") in view of the Serrano-Morales et al. patent (United States Patent No. 6,965,889, issued November 15, 2005, hereinafter "Serrano-Morales"). In response, the Applicants have amended independent claims 1, 17 and 24, from which claims 2-5, 9-16, 18-21 and 25-28 depend, in order to more clearly recite aspects of the invention.

The Examiner's attention is respectfully directed to the fact that Abrari and Serrano-Morales, individually or in any permissible combination, fail to teach, show or suggest the novel invention of creating at least one individualized language rule by limiting individualized vocabulary terms (*i.e.*, nouns, verbs, and sentence fragments) of rule set input and output groups, from among which an end-user may select inputs and outputs (*i.e.*, variables) to a rule template, to individualized vocabulary terms contained in an individualized vocabulary that is chosen by the end-user, as positively claimed in the Applicants' amended independent claims 1, 17 and 24. Specifically, Applicants' claims 1, 17 and 24, as amended, recite:

> 1.   A method of authoring and executing an individualized language business rule, the method comprising:
>   creating a plurality of individualized vocabularies, each of the plurality of individualized vocabularies comprising at least one individualized vocabulary term that is a noun, a verb, or a sentence fragment, said at least one individualized vocabulary term being mapped onto at least one executable object;
>   creating the individualized language business rule, where the individualized language business rule references at least one individualized vocabulary term from one of said plurality of individualized vocabularies, where

9

10/725,352

said creating comprises:

receiving a selection from an end-user of said one of the plurality of individualized vocabularies;

creating a rule set input group and a rule set output group, each of the rule set input group and the rule set output group comprising individualized vocabulary terms that are available to the end-user for building the individualized language business rule, where the individualized vocabulary terms are limited to individualized vocabulary terms contained in the one of said plurality of individualized vocabularies that was selected by the end-user such that at least one of the rule set input group and the rule set output group includes the at least one individualized vocabulary term from the one of said plurality of individualized vocabularies;

creating at least one individualized rule template; and

creating at least one individualized rule from said at least one individualized rule template, based on end-user-selected inputs and outputs to the individualized rule template, the end-user-selected inputs and outputs being selected by the end-user from the rule set input group and the rule set output group, respectively, where at least one of the end-user-selected inputs and the end-user-selected outputs includes the at least one individualized vocabulary term from the one of said plurality of individualized vocabularies;

organizing said at least one individualized vocabulary term from said one of said plurality of vocabularies and said at least one individualized language business rule into at least one individualized language rule set; and

transforming said at least one individualized language business rule into computer executable format. (Emphasis added)

17.   A system for authoring and executing an individualized language business rule, the system comprising:

means for creating a plurality of individualized vocabularies, each of the plurality of individualized vocabularies comprising at least one individualized vocabulary term that is a noun, a verb, or a sentence fragment, said at least one individualized vocabulary term being mapped onto at least one executable object;

means for creating the individualized language business rule, where the individualized language business rule references at least one individualized vocabulary term from one of said plurality of individualized vocabularies, where said creating comprises:

means for receiving a selection from an end-user of said one of the plurality of individualized vocabularies;

means for creating a rule set input group and a rule set output group, each of the rule set input group and the rule set output group

10

10/725,352

comprising individualized vocabulary terms that are available to the end-user for building the individualized language business rule, where the individualized vocabulary terms are limited to individualized vocabulary terms contained in the one of said plurality of individualized vocabularies that was selected by the end-user such that at least one of the rule set input group and the rule set output group includes the at least one individualized vocabulary term from the one of said plurality of individualized vocabularies;

means for creating at least one individualized rule template; and

means for creating at least one individualized rule from said at least one individualized rule template, based on end-user-selected inputs and outputs to the individualized rule template, the end-user-selected inputs and outputs being selected by the end-user from the rule set input group and the rule set output group, respectively, where at least one of the end-user-selected inputs and the end-user-selected outputs includes the at least one individualized vocabulary term from the one of said plurality of individualized vocabularies;

means for organizing said at least one individualized vocabulary term from said one of said plurality of vocabularies and said at least one individualized language business rule into at least one individualized language rule set; and

means for transforming said at least one individualized language business rule into computer executable format. (Emphasis added)

24.   A computer-readable media for authoring and executing an individualized language business rule, which when executed by a processor performs the steps of:

creating a plurality of individualized vocabularies, each of the plurality of individualized vocabularies comprising at least one individualized vocabulary term that is a noun, a verb, or a sentence fragment, said at least one individualized vocabulary term being mapped onto at least one executable object;

creating the individualized language business rule, where the individualized language business rule references at least one individualized vocabulary term from one of said plurality of individualized vocabularies, where said creating comprises:

receiving a selection from an end-user of said one of the plurality of individualized vocabularies;

creating a rule set input group and a rule set output group, each of the rule set input group and the rule set output group comprising individualized vocabulary terms that are available to the end-user for building the individualized language business rule, where the individualized vocabulary terms are limited to individualized vocabulary

11

10/725,352

terms contained in the one of said plurality of individualized vocabularies that was selected by the end-user such that at least one of the rule set input group and the rule set output group includes the at least one individualized vocabulary term from the one of said plurality of individualized vocabularies;

creating at least one individualized rule template; and

creating at least one individualized rule from said at least one individualized rule template, based on end-user-selected inputs and outputs to the individualized rule template, the end-user-selected inputs and outputs being selected by the end-user from the rule set input group and the rule set output group, respectively, where at least one of the end-user-selected inputs and the end-user-selected outputs includes the at least one individualized vocabulary term from the one of said plurality of individualized vocabularies;

organizing said at least one individualized vocabulary term from said one of said plurality of vocabularies and said at least one individualized language business rule into at least one individualized language rule set; and

transforming said at least one individualized language business rule into computer executable format. (Emphasis added)

The Applicants' invention is directed to a method and apparatus for business rules authoring and operation employing a customizable vocabulary. Rules engagement is a well-known and important technique for governance of distributed application systems. Rules are typically codified and rules systems are typically managed by programmers. Unfortunately, non-programmers such as business users are generally unable to participate in the management of distributed application systems due to lack of technical and/or programming expertise. Thus, either a business user must learn a programming language, or a programmer must anticipate the wishes of the business user and interpret them into a programming language.

The Applicants' invention addresses these concerns by providing an individualized language that allows a non-programmer end-user to author logic directly carried out by a computer. The individualized language is a combination of permissible statements (e.g., if-then-else or the like) and a customizable vocabulary upon which the statements operate. The customizable vocabulary includes a plurality of individualized vocabulary terms (nouns, verbs, and sentence fragments) in the parlance of the intended end-user that are each mapped onto an executable object. The vocabulary for

10/725,352

authoring rules (*i.e.*, the nouns, verbs, and sentence fragments from which an end-user can select variables for tailoring a rule) is limited to a vocabulary that is chosen by the end-user. For example, there may be a common object defined in the programmer's world known as "Customer." If an end-user of the Applicants' claimed system works in insurance, he may wish to select a vocabulary in which the individualized vocabulary terms that he will be presented with for use in authoring a rule are insurance-oriented (*e.g.*, "Customer" may be represented as "Insured", etc.), as opposed to a vocabulary in which the individualized language rules are banking-oriented. Thus, the end-user has a degree of control in defining the set of vocabulary terms from which he or she may select when authoring a rule.

The Examiner concedes on Page 4 of the Office Action that "Abrari does not teach scoping a vocabulary of the rule set input and output groups ... in accordance with one or more choices made by the user". Serrano-Morales does not bridge this gap in the teachings of Abrari. Specifically, Serrano-Morales also does not teach, show or suggest <u>limiting individualized vocabulary terms (*i.e.*, nouns, verbs, and sentence fragments) of rule set input and output groups</u>, from among which an end-user may select inputs and outputs (*i.e.*, variables) to a rule template, <u>to individualized vocabulary terms contained in an individualized vocabulary that is chosen by the end-user</u>.

The Examiner submits in the Office Action that "[t]he choices presented to the user [of Serrano-Morales's system] for each element are considered 'a vocabulary'" (Office Action, Page 9). The Applicants submit that even if these choices are considered "a vocabulary", <u>these choices are still not limited in accordance with a vocabulary chosen by a user</u>. That is, the end-user has <u>no control over or input</u> as to the <u>contents of the "vocabulary"</u>. At best, Serrano Morales teaches that the choices are defined or limited by <u>rule element providers</u> that "define a set of choices that a user may choose for a particular editable rule element" (Serrano-Morales at column 3, lines 50-52). The rule element providers are generated <u>by a rules engineer</u> (*see, e.g.*, Serrano-Morales at column 3, lines 25-28), and <u>not by the end-user</u> (*i.e.*, the person authoring a rule). The end-user, according to Serrano-Morales's system, therefore has no say in the definition of the choices; the choices are given to the end-user without solicitation of

13

10/725,352

his input.

The Examiner further submits that "[i]f the user is selecting or setting values (choices made by the user) to the rule elements from the choices presented, then he is scoping the vocabulary (the list of choices that the element may contain) in order to form the rules" (Office Action, Page 10). The Applicants submit that the scenario proposed by the Examiner at best demonstrates a limiting of the rule by the end-user. The list of choices that the element may contain is not defined in accordance with any input from the end-user; it is still dictated to the end-user. That is, the end-user has no control over definition of the set of choices.

Moreover, the Examiner's arguments support the Applicants' submission that the end-user does not control definition of the list of choices from which he may choose. On Page 11 of the Office Action, the Examiner states, "the selections available to the user are generated by the rules engineer and used to create the rule template" (emphasis added). The rules engineer is not the end-user (i.e., the person creating the rules), but merely the person who configures the system of Serrano-Morales for use by the end-user. Serrano-Morales, like Abrari, simply does not contemplate the end-user as a source for limiting or defining the set of choices from among which a rule template variable can be chosen.

As such, the Applicants submit that claims 1, 17 and 24 are not made obvious by the teachings of Abrari in view of Serrano-Morales. Therefore, the Applicants submit claims 1, 17 and 24 fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

Claims 2-5, 9-16, 18-21 and 25-28 depend from claims 1, 17 and 24 and recite additional limitations therefor. Accordingly, and for at least the same reasons set forth above, the Applicants respectfully submit that claims 2-5, 9-16, 18-21 and 25-28 also are not made obvious by the teachings of Abrari in view of Serrano-Morales. Therefore, the Applicants submit claims 2-5, 9-16, 18-21 and 25-28 also fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

14

10/725,352

III. CONCLUSION

Thus, the Applicants submit that all of the presented claims fully satisfy the requirements of 35 U.S.C. §103. Consequently, the Applicants believe that all of the presented claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the issuance of a final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Kin-Wah Tong, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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Date

Kin-Wah Tong, Attorney
Reg. No. 39,400
(732) 530-9404

Patterson & Sheridan, LLP
595 Shrewsbury Avenue
Shrewsbury, New Jersey 07702

15